

# SEQUENCE LISTING

<110> Blumenberg, Miroslav  
Gazel, Alix M

<120> GENES AND POLYNUCLEOTIDES ASSOCIATED WITH ULTRAVIOLET  
RADIATION-MEDIATED SKIN DAMAGE AND USES THEREOF

<130> PC10489A

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<150> 60/155,029

<151> 1999-09-20

<160> 19

<170> PatentIn Ver. 2.1

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cat gat gac atc tgc aat aaa act ttg aag att aca gat ttt ggg ttg 97  
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gcg agg gaa tgg cac agg acc acc aaa atg agc aca gca ggc acc tat 145  
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Val Lys Leu Ser Asp Phe Gly Phe Cys Ala Gln Val Ser Lys Glu Val  
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cag atc agc acc agc aac ctg tac ctg ccc cag gac ccc acg gtt gcc 1038  
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aag ggt gcc ctg gct ggt gag gac aca ggt gtt gtg aca cat gag cag 1086  
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 Leu Leu Asp Ser Tyr Val Lys Ile Gly Glu Gly Ser Thr Gly Ile Val  
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 Cys Leu Ala Arg Glu Glu His Ser Gly Arg Gln Val Ala Val Lys Met  
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140 145

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Phe Asn Val Val Glu Met Tyr Lys Ser Tyr Leu Val Gly Glu Glu Leu  
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Lys Ser Asp Ser Ile Leu Leu Thr Leu Asp Gly Arg  
215 220

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gac gtc cct aag agg aag tcc ctg gtg gga acc ccc tac tgg atg gct 2194  
Asp Val Pro Lys Arg Lys Ser Leu Val Gly Thr Pro Tyr Trp Met Ala  
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270

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Gly Ile Met Val Ile Glu Met Val Asp Gly Glu Pro Pro Tyr Phe Ser  
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Asp Ser Pro Val Gln Ala Met Lys Arg Leu Arg Asp Ser Pro Pro Pro  
290 295 300

aag ctg aaa aac tct cac aag gtc agttggcaca caagggtgcg acctgcgaga 2863  
Lys Leu Lys Asn Ser His Lys Val  
305 310

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Tyr	Leu	Pro	Gln	Asp	Pro	Thr	Val	Ala	Lys	Gly	Ala	Leu	Ala	Gly	Glu
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Val	Val	Asp	Gln	Gly	Asp	Pro	Arg	Leu	Leu	Leu	Asp	Ser	Tyr	Val	Lys
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Ile	Gly	Glu	Gly	Ser	Thr	Gly	Ile	Val	Cys	Leu	Ala	Arg	Glu	Glu	His
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Ser	Gly	Arg	Gln	Val	Ala	Val	Lys	Met	Met	Asp	Leu	Arg	Lys	Gln	Gln
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Arg	Arg	Glu	Leu	Leu	Phe	Asn	Glu	Val	Val	Ile	Met	Arg	Asp	Tyr	Gln
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145                      150                      155                      160  
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 Val Ser Gln Val Arg Leu Asn Glu Glu Gln Ile Ala Thr Val Cys Glu  
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 Ala Val Leu Gln Ala Leu Ala Tyr Leu His Ala Gln Gly Val Ile His  
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 Arg Asp Ile Lys Ser Asp Ser Ile Leu Leu Thr Leu Asp Gly Arg Val  
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 Lys Arg Lys Ser Leu Val Gly Thr Pro Tyr Trp Met Ala Pro Glu Val  
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 Ile Ser Arg Ser Leu Tyr Ala Thr Glu Val Asp Ile Trp Ser Leu Gly  
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cctctcctca gcgcctaaga gagaggccca gtgcgggtga ggagtcgcga ggaagaggcg 180

gaaggcgccg gaaggacc atg ttc cgc aag aaa aag aag aaa cgc cct gag 231  
Met Phe Arg Lys Lys Lys Lys Lys Arg Pro Glu  
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atc tca gcg cca cag aac ttc cag cac cgt gtc cac acc tcc ttc gac 279  
Ile Ser Ala Pro Gln Asn Phe Gln His Arg Val His Thr Ser Phe Asp  
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ccc aaa gaa ggc aag ttt gtg ggc ctc ccc cca caa tgg cag aac atc 327  
Pro Lys Glu Gly Lys Phe Val Gly Leu Pro Pro Gln Trp Gln Asn Ile  
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Leu Asp Thr Leu Arg Arg Pro Lys Pro Val Val Asp Pro Ser Arg Ile  
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aca cgg gtg cag ctc cag ccc atg aag aca gtg gtg cgg ggc agc gcg 423  
Thr Arg Val Gln Leu Gln Pro Met Lys Thr Val Val Arg Gly Ser Ala  
60 65 70 75

atg cct gtg gat ggc tac atc tcg ggg ctg ctc aac gac atc cag aag 471  
Met Pro Val Asp Gly Tyr Ile Ser Gly Leu Leu Asn Asp Ile Gln Lys  
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Ala Ser Gln Arg Cys Leu Gln Leu Gly Ala Cys Leu Gln Ser Ser Pro			
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cca gga gcc tcg ccc ccc acg ggc acc aat agg cat gga atg aag gct			855
Pro Gly Ala Ser Pro Pro Thr Gly Thr Asn Arg His Gly Met Lys Ala			
205	210	215	
gcc aag cat ggc tct gag gag gcc cgg cca cag tcc tgc ctg gtg ggc			903
Ala Lys His Gly Ser Glu Glu Ala Arg Pro Gln Ser Cys Leu Val Gly			
220	225	230	235
tca gcc aca ggc agg cca ggt ggg gaa ggc agc cct agc cct aag acc			951
Ser Ala Thr Gly Arg Pro Gly Gly Glu Gly Ser Pro Ser Pro Lys Thr			
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cgg gag agc agc ctg aag cgc agg cta ttc cga agc atg ttc ctg tcc			999
Arg Glu Ser Ser Leu Lys Arg Arg Leu Phe Arg Ser Met Phe Leu Ser			
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Thr Ala Ala Thr Ala Pro Pro Ser Ser Ser Lys Pro Gly Pro Pro Pro			
270	275	280	
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Gln Ser Lys Pro Asn Ser Ser Phe Arg Pro Pro Gln Lys Asp Asn Pro			
285	290	295	
cca agc ctg gtg gcc aag gcc cag tcc ttg ccc tcg gac cag ccg gtg			1143
Pro Ser Leu Val Ala Lys Ala Gln Ser Leu Pro Ser Asp Gln Pro Val			
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ggg acc ttc agc cct ctg acc act tcg gat acc agc agc ccc cag aag			1191
Gly Thr Phe Ser Pro Leu Thr Thr Ser Asp Thr Ser Ser Pro Gln Lys			
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Ser Leu Arg Thr Ala Pro Ala Thr Gly Gln Leu Pro Gly Arg Ser Ser			
335	340	345	
cca gcg gga tcc ccc cgc acc tgg cac gcc cag atc agc acc agc aac			1287
Pro Ala Gly Ser Pro Arg Thr Trp His Ala Gln Ile Ser Thr Ser Asn			
350	355	360	
ctg tac ctg ccc cag gac ccc acg gtt gcc aag ggt gcc ctg gct ggt			1335
Leu Tyr Leu Pro Gln Asp Pro Thr Val Ala Lys Gly Ala Leu Ala Gly			

365	370	375	
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Glu Asp Thr Gly Val Val Thr His Glu Gln Phe Lys Ala Ala Leu Arg			
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atg gtg gtg gac cag ggt gac ccc cgg ctg ctg ctg gac agc tac gtg			1431
Met Val Val Asp Gln Gly Asp Pro Arg Leu Leu Leu Asp Ser Tyr Val			
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Lys Ile Gly Glu Gly Ser Thr Gly Ile Val Cys Leu Ala Arg Glu Lys			
	415	420	425
cac tcg ggc cgc cag gtg gcc gtc aag atg atg gac ctc agg aag cag			1527
His Ser Gly Arg Gln Val Ala Val Lys Met Met Asp Leu Arg Lys Gln			
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Gln His Phe Asn Val Val Glu Met Tyr Lys Ser Tyr Leu Val Gly Glu			
460	465	470	475
gag ctg tgg gtg ctc atg gag ttc ctg cag gga gga gcc ctc aca gac			1671
Glu Leu Trp Val Leu Met Glu Phe Leu Gln Gly Gly Ala Leu Thr Asp			
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Ile Val Ser Gln Val Arg Leu Asn Glu Glu Gln Ile Ala Thr Val Cys			
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His Arg Asp Ile Lys Ser Asp Ser Ile Leu Leu Thr Leu Asp Gly Arg			
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Val Lys Leu Ser Asp Phe Gly Phe Cys Ala Gln Ile Ser Lys Asp Val			
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Asp Ser Pro Val Gln Ala Met Lys Arg Leu Arg Asp Ser Pro Pro Pro			
605	610	615	
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Lys Leu Lys Asn Ser His Lys Val Ser Pro Val Leu Arg Asp Phe Leu			
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Glu Arg Met Leu Val Arg Asp Pro Gln Glu Arg Ala Thr Ala Gln Glu			
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Leu Leu Asp His Pro Phe Leu Leu Gln Thr Gly Leu Pro Glu Cys Leu			
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